the case as one of syringomyelia, the relation of the symptoms to the accident was very significant. He had found several cases on record where a very definite connection was traced between an injury and the onset of syringomyelia.

REMARKS ON MYOCLONUS EPILEPSY, WITH REPORT OF A CASE.

By Dr. L. Pierce. Clark.

The case reported was of the family type, and was briefly as follows: The patient was a woman, fifty-two years old, single, who was admitted to the Craig Colony for Epileptics on Sept. 30, 1904. Her paternal grandmother had always suffered from headaches. A paternal uncle had three children, one boy and two girls, all of whom suffered from myoclonus-epilepsy similar to that of this patient. The disease was known in the family as St. Vitus' dance and fits. Whether the epilepsy or myoclonus developed first in the cousins was not certain. The eldest of the myoclonus-epileptic cousins (female) married and had one child, who lived to an adult age and showed no signs of the disease or other nervous affection. The mother died of an unknown disease at fifty years of age. The two male myoclonus-epileptic cousins died of unknown diseases at the ages of twenty-five and thirty, respectively. A maternal granduncle was insane and had several children who were insane; one grandson (second cousin to the patient) died of paresis. Several maternal relatives had tuberculosis. The father and mother of our patient were first cousins. Both suffered from chronic rheumatism. The father was still living and was a fairly healthy man of seventy-five years.

The patient was a strong child. She had an ordinary attack of typhoid fever at ten years of age. She began school at five years of age and made the average progress of her grades until thirteen years of age, when she had a typical grand mal epileptic fit at night, without obvious cause. The myoclonus, which either immediately preceded or followed the fit, began in the arms first. Although it was more or less constant after its inception, its paroxysmal intensity at stated periods was certain. On the bad days, the myoclonus often interfered with her piano practice. It was interesting to note that the patient saw her myoclonic cousins a few months prior to the onset of her own disease, and she was much affected by the sight. The fits were rather severe in her fourteenth year, and on one occasion she had seven severe fits in one night. From fifteen to forty-two years of age the attacks were less frequent, averaging one a month. She was now having eight attacks a year; four grand mal and four petit mal, equally divided between day and night attacks. An aura of a cramp-like sensation in the right wrist was invariably present formerly, but it was now absent. For several years after the onset of her association disease she had increasing vertigo and myoclonic movements for two or three weeks before the genuine fits occurred, after which she was perfectly free from myoclonus for two or three days. The myoclonus never interfered with nor did it occur during sleep. Bromide and chloral, particularly the latter, improved her condition considerably during the thirteen years of their use, from the onset of the disease. She was now a Christian Scientist, and had taken no medicine for several years. Coffee had some quieting effect on the myoclonic movements. The patient had nocturnal enuresis until she was thirty-one years of age; this stopped without treatment. Involuntary urination never occurred during the myoclonic or epileptic attacks.

Dr. Clark said that the epileptic attacks in this case were so classic in detail that they did not deserve mention. They had produced little or no mental enfeeblement. Some myoclonus was now present every day. The movements ranged in degree from slight fibrillary twitchings in individual muscles to that of universal involvement of all voluntary muscles. Extremes of heat and cold, mental stress and emotion excited the myoclonus. At first, the myoclonus often interfered with swallowing, and occasionally now, at the height of paroxysmal myoclonic days, foods and fluids were forcibly ejected at meals. She had broken her nose and received many disfigurements about the face due to her myoclonic attacks. At the present time the myoclonic movements might be observed to rapidly succeed each other in a series of brisk, shock-like muscular contractions typical of myoclonus. All the muscles of the trunk and extremities were involved in this play of spasm movement, bewildering to describe. The large proximal muscles of the extremities were most involved, together with those of the trunk proper. The movements of the muscles of the two sides were a little asynchronous, the body and head being hurled to the right frequently at the end of the complex movement. In the extreme paroxysm all the muscles of the face were markedly affected, and the diaphragm and respiratory muscles were commonly involved. At times, when standing, she was thrown from her feet by the shock-like contractions; if she remained in bed she was almost hurled from it by the violent contractions. There was never loss of consciousness during any myoclonic movements. Speech was commonly interrupted thereby by the violence of respiratory involvement, but continuity of thought was never broken. The great flexors of the trunk were most involved, and the contractions of the rectus abdominis were often painful. For several days following these severe periods of myoclonus a feeling of general exhaustion and muscle soreness existed. The nervous system showed no other abnormality, nor was there any hysterical stigma.

Dr. Charles L. Dana said that Dr. Clark was so familiar with the subject of myoclonic epilepsy, and had presented it so fully, that he hesitated to make any criticism or offer a different point of view. The speaker said that from an observation of several cases that had come under his care he was inclined to regard the myoclonic manifestations as a serious, progressive motor disorder, finally involving the whole body, so that for protracted periods many of the muscles were in a state of almost continual tonic contraction. In addition to the twitching of the muscles, there were, at the same time, certain irregular movements which were entirely similar to those observed in chorea. That fact had led him to look upon the disease as a degenerative myoclonus, and one that was closely related to the degenerative tics. When associated with epilepsy, the latter might be regarded as a terminal condition or an accidental occurrence, or the combination perhaps represented those forms which had a particularly serious family character. At all events, he was inclined to recognize a form of degenerative myoclonus which was distinct from the epileptic type.

Twenty years ago, Dr. Dana said, he reported a case of this character under the title of choreic tics. The term myoclonus epilepsy was then unknown. The onset of the disease in that case was very similar to that observed in Sydenham's chorea, the movements first being limited to one arm and gradually involving the entire body. There were also intercurrent epileptic attacks, which were regarded as accidental. The patient died, and an autopsy showed changes in the cortical cells.

Dr. C. E. Atwood said he had seen two cases of myoclonus associated with epilepsy, and one of myoclonus without epilepsy. The latter patient was an inmate of a hospital in London, and was regarded by the physicians there as a case of multiple tic. The movements which involved the muscles of the trunk and extremities were violent and lightning-like in character, and the case corresponded very closely to the disease that had since then been so well described by Dr. Clark under the name of myoclonus.

Dr. Clark, in closing, said that in the near future he expected to show some biographic pictures which were taken of a well-marked case of myoclonus epilepsy, and these, he felt assured, would clearly differentiate this type of case from the condition known as multiple tic. The character of the movements in the two conditions was entirely distinct.

PHILADELPHIA NEUROLOGICAL SOCIETY.

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The President, Dr. D. J. McCarthy, in the Chair.

A CASE OF INCOMPLETE BROWN SEQUARD PARALYSIS.

By Dr. G. E. Price.

J. G., Italian laborer, aged 46, from the Philadelphia Hospital.

Eight years ago he had been stabbed in the neck by a fellow-countryman, the wound being followed by immediate loss of power in the left arm and leg, the right side of the body being unaffected. Movement of the shoulder was regained within a few days, and some motion of the fingers in a month. He was in bed 17 days and could walk in about one year from the time of the injury. Upon examination a linear scar three-quarters of an inch in length is seen, almost horizontal, and directly across the median line of the neck between the spinus processes of the sixth and seventh cervical vertebræ. The pupils are unequal, the right being the larger; both react to light and accommodation; there are no external ocular palsies. The patient has no motor or sensory involvement of the face, and no difficulty in swallowing; the tongue is protruded in the median line. His gait shows a stiffness and dragging of the left leg, the station is normal.

Of the upper extremities, the movements and reflexes of the right arm are normal, the left arm presents no weakness of the muscles about the shoulder, of the biceps or triceps, but the grip is distinctly weak. All reflexes of the left arm are plus; there is no inco-ordination of either extremity.

The trunk presents no signs of muscular weakness, the cremasteric and abdominal reflexes are preserved on both sides, the sphincters are unaffected.

In the lower extremities there is no muscular weakness or rigidity of the right leg, the left leg is distinctly weak and stiff. The knee-jerks and Achilles jerks are increased on both sides, especially on the left, ankle clonus is absent on the right side and present on the left; there is no Babinski or Gordon reflex on either side and no inco-ordination.

Sensation: Tactile sense, pressure sense and muscle sense are pre-